



News Release

United States Navy

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New Weather Satellite to be launched Sunday Titan II to Loft the Coriolis mission

VANDENBERG AFB, Calif. – A government and industry team is scheduled to launch the Coriolis mission at 6:18 a.m. Pacific Time aboard a Titan II Space Launch Vehicle Sunday, December 15th from the Western Range here in Santa Barbara County.

The Air Force Coriolis mission will fly the Navy Windsat microwave polarimetric radiometer and Air Force Solar Mass Ejection Imager in a low Earth, sun synchronous orbit. The Windsat radiometer will provide important meteorological information on wind speed and direction at or near the surface of the ocean and the Solar Mass Ejection Imager will provide valuable early warning of coronal mass ejections that affect communications and power distribution systems here on earth.

The Coriolis mission is being assembled and launched by the Air Force Space and Missile Systems Center's Detachment 12 Space Test Program Office at Kirtland Air Force Base in Albuquerque, New Mexico using a refurbished Lockheed Martin Titan II booster and a Spectrum Astro spacecraft bus. Spectrum Astro is integrating the spacecraft bus and payloads with the Titan II for launch from Vandenberg Air Force Base in California.

Coriolis mission operations will be conducted by Detachment 12's, Vehicle Operations Directorate, Research, Development, Test & Evaluation Support Complex at Kirtland Air Force Base. After the first year, the Naval Satellite Operations Center at Point Mugu will conduct joint flight operations with Blossom Point for the remainder of the mission.

The Navy's Space and Naval Warfare Systems Command is providing the Naval Research Lab built Windsat polarimetric microwave radiometer. This radiometer is an important step in reducing risks associated with the National Polar-orbiting Operational Environmental Satellite System by proving the concept of using a space-based radiometer for measuring ocean surface wind speed and direction. Windsat will demonstrate the viability of using polarimetry to measure the wind vector from space



Technicians from Spectrum Astro work on the integrated Coriolis / Windsat / SMEI spacecraft at Vandenberg AFB's Astrotech high bay facility. The spacecraft is mated with the Titan II launch vehicle after successful end to end checkout of the payloads with the spacecraft bus. Photo Courtesy Naval Research Lab

and provide operationally usable tactical information to Navy units. The payload provides risk reduction data that the NPOESS Integrated Program Office (NOAA / NASA / Air Force / Navy) will use in the development of the Conical Microwave Imager Sounder (CMIS). Windsat is the primary payload on the Coriolis mission and is funded by the Navy and NPOESS IPO.

The Air Force Research Lab at Hanscom AFB, Mass., is providing the Solar Mass Ejection Imager that will improve space weather forecasts by monitoring and warning of impending geomagnetic storms solar plasma and magnetic fields. A geomagnetic storm can cause a wide variety of damaging effects to military and civilian spacecraft, ground-based communications and power distribution systems, degraded satellite communication and surveillance systems, increased drag and deterioration of satellite altitude control. Coronal Mass Ejections, known as CMEs, consist of solar plasma and embedded magnetic fields traveling at speeds of up to 1,000 km/second (2,236,936 miles/hour). Advanced warning of such storms would permit initiation of preventive measures to mitigate these effects. At present, prediction of even moderate geomagnetic storms is difficult. SMEI should provide advanced warning of one to three days of impending geomagnetic storms by tracking CMEs from the Sun to near-Earth space.

Vandenberg Air Force Base is headquarters for the 30th Space Wing. The 30th is home to the Western Range and manages Department of Defense space and missile testing, and placing satellites into near-polar orbit from the West Coast, using expendable boosters (Delta II, Atlas, Titan II and Titan IVB.) Wing personnel also support the service's Minuteman III and Peacekeeper Intercontinental Ballistic Missile Follow-on Operational Test and Evaluation Launch program. The Western Range begins at the coastal boundaries of Vandenberg and extends westward from the California coast to the western Pacific including sites in Hawaii.

The launch window is 15 minutes. Should the launch not occur Sunday morning, an additional launch attempt is scheduled 24-hours later (Monday morning). Spacecraft separation is scheduled to occur almost one hour after liftoff. The initial orbit is scheduled to be 827 kilometers by 278 kilometers with a 98.7 degree inclination.

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